

TI Recombinant transferrins, transferrin half-molecules, and mutants thereof with improved iron-binding properties PY 1999

(FILE 'HOME' ENTERED AT 10:36:53 ON 04 MAY 2001)
FILE 'REGISTRY' ENTERED AT 10:37:05 ON 04 MAY 2001
E VPDKTVRWCAVS/SQEP
L1 22 S VPDKTVRWCAVS/SQEP

FILE 'CA' ENTERED AT 10:38:42 ON 04 MAY 2001

L2 11 S L1
L3 11050 S TRANSFERRIN/CT
L4 54785 S MOLECULAR CLONING/CT
L5 72 S L3 AND L4
L6 878481 S MUTAT? OR SUBSTITUT? OR MUTANT?
L7 8 S L5 AND L6
L8 555 S L3 AND L6 NOT L7
L9 6479 S TRANSFERRIN/TI
L10 240 S L8 AND L9
L11 8838 S L3 NOT RECEPTOR
L12 385 S L11 AND L6 NOT L5
L13 147 S L12 AND 1960-1990/ PY

E1 1 VPDKTVKWN/SQEP
E2 1 VPDKTVRW'AAA'AVS/SQEP
E3 1 -> VPDKTVRWCAVS/SQEP
E4 1 VPDKTVRWCAVS/SEHATKQSFDRHMKSVIPSDGPSVACVKKA
SYLCIRAIANEADAVTLCAGLVYDAYLAPNNLKPVAEFYGS
KEDPQTFYAVAVVKKDSGFQMNQRLGKKSKCHTGLRSAGW
N IPGLLYCDLPEPRKPLEKAVANFSGSCAPCADGTDFFPQLCQ
LPCGCGSTLNEYFGYSGAFKCLKDGAG/SQEP
E5 9 VPDKTVRWCAVS/SEHATKQSFDRHMKSVIPSDGPSVACVKKA
SYLCIRAIANEADAVTLDAGLVYDAYLAPNNLKPVAEFYGS
KEDPQTFYAVAVVKKDSGFQMNQRLGKKSKCHTGLRSAGW
IPGLLYCDLPEPRKPLEKAVANFSGSCAPCADGTDFFPQLCQ
PGCGSTLNEYFGYSGAFKCLKDGAG/SQEP
E6 2 VPDKTVRWCAVS/SEHATKQSFDRHMKSVIPSDGPSVACVKKA
SYLCIRAIANEADAVTLDAGLVYDAYLAPNNLKPVAEFYGS
KEDPQTFYAVAVVKKDSGFQMNQRLGKKSKCHTGLRSAGW
IPGLLYCDLPEPRKPLEKAVANFSGSCAPCADGTDFFPQLCQ
PGCGSTLNEYFGYSGAFKCLKDGAG/SQEP
E7 2 VPDKTVRWCAVS/SEHATKQSFDRHMKSVIPSDGPSVACVKKA
SYLCIRAIANEADAVTLDAGLVYDAYLAPNNLKPVAEFYGS
KEDPQTFYAVAVVKKDSGFQMNQRLGKKSKCHTGLRSAGW
IPGLLYCDLPEPRKPLEKAVANFSGSCAPCADGTDFFPQLCQ
PGCGSTLNEYFGYSGAFKCLKDGAG/SQEP
E8 1 VPDKTVRWCAVS/SEHATKQSFDRHMKSVIPSDGPSVACVKKA
SYLCIRAIANEADAVTLDAGLVYDAYLAPNNLKPVAEFYGS
KEDPQTFYAVAVVKKDSGFQMNQRLGKKSKCHTGLRSAGW
IPGLLYCDLPEPRKPLEKAVANFSGSCAPCADGTDFFPQLCQ
PGCGSTLNEYFGYSGAFKCLKDGAG/SQEP
E9 1 VPDKTVRWCAVS/SEHATKQSFDRHMKSVIPSDGPSVACVKKA
SYLCIRAIANEADAVTLDAGLVYDAYLAPNNLKPVAEFYGS
KEDPQTFYAVAVVKKDSGFQMNQRLGKKSKCHTGLRSAGW
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PGCGSTLNEYFGYSGAFKCLKDGAG/SQEP
E10 1 VPDKTVRWCAVS/SEHATKQSFDRHMKSVIPSDGPSVACVKKA
SYLCIRAIANEADAVTLDAGLVYDAYLAPNNLKPVAEFYGS
KEDPQTFYAVAVVKKDSGFQMNQRLGKKSKCHTGLRSAGW
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PGCGSTLNEYFGYSGAFKCLKDGAG/SQEP
E11 1 VPDKTVRWCAVS/SEHATKQSFDRHMKSVIPSDGPSVACVKKA
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KEDPQTFYAVAVVKKDSGFQMNQRLGKKSKCHTGLRSAGW
IPGLLYCDLPEPRKPLEKAVANFSGSCAPCADGTDFFPQLCQ
PGCGSTLNEYFGYSGAFKCLKDGAG/SQEP
E12 1 VPDKTVRWCAVS/SEHATKQSFDRHMKSVIPSDGPSVACVKKA
SYLCIRAIANEADAVTLDAGLVYDAYLAPNNLKPVAEFYGS
KEDPQTFYAVAVVKKDSGFQMNQRLGKKSKCHTGLRSAGW
IPGLLYCDLPEPRKPLEKAVANFSGSCAPCADGTDFFPQLCQ
PGCGSTLNEYFGYSGAFKCLKDGAG/SQEP

L2 ANSWER 1 OF 11 CA COPYRIGHT2001 ACS
TI Nucleic acids and their encoded proteins for the diagnosis of human lung cancer PY 2000

L2 ANSWER 2 OF 11 CA COPYRIGHT2001 ACS
TI Expressed sequence tags and encoded human proteins PY 2000

L2 ANSWER 3 OF 11 CA COPYRIGHT2001 ACS

TI Recombinant transferrins, transferrin half-molecules, and mutants thereof with improved iron-binding properties PY 1999

L2 ANSWER 4 OF 11 CA COPYRIGHT2001 ACS
TI Chimeric proteins for use in transport of a selected substance into cells and their therapeutic and diagnostic uses p Y 1996 1998 1996 2000 1998 1999 2000

L2 ANSWER 5 OF 11 CA COPYRIGHT2001 ACS
TI Transgenic animal expressing a human transferrin gene for use in the evaluation of treatments for pathogens binding transferrin PY 1994 1994 1994

L2 ANSWER 6 OF 11 CA COPYRIGHT2001 ACS
TI A cloned gene for human transferrin PY 1991

L2 ANSWER 7 OF 11 CA COPYRIGHT2001 ACS
TI Recombinant transferrins, transferrin half-molecules, and mutants thereof PY 1992 1992 1995 1996

L2 ANSWER 8 OF 11 CA COPYRIGHT2001 ACS
TI Cloning and sequencing of a cDNA for human transferrin PY 1991

L2 ANSWER 9 OF 11 CA COPYRIGHT2001 ACS
TI Human transferrin: cDNA characterization and chromosomal localization PY 1984

L2 ANSWER 10 OF 11 CA COPYRIGHT2001 ACS
TI The primary structure of human serum transferrin. The structures of seven cyanogen bromide fragments and the assembly of the complete structure PY 1983

L2 ANSWER 11 OF 11 CA COPYRIGHT2001 ACS
TI The complete amino acid sequence of human serum transferrin PY 1982

L2 ANSWER 6 OF 11 CA COPYRIGHT2001 ACS
AN 119:21679 CA

TI A cloned gene for human transferrin
AU Hersberger, C. L.; Larson, J. L.; Arnold, B.; Rostock, P. R., Jr.; Williams, P.; DeHoff, B.; Dunn, P.; O'Neal, K. L.; Riemen, M. W.; et al. CS Lilly Res. Lab., Eli Lilly and Co., Indianapolis, IN, 46285, USA
SO Ann. N. Y. Acad. Sci. (1991), 646(Recomb. DNA Technol. I), 140-54
CODEN: ANYAA9; ISSN: 0077-8923 DT Journal L.A. English
AB To obtain large quantities of transferrin the human gene (trf) was cloned and the recombinant plasmid, pHDM99 was subsequently expressed in Escherichia coli. Sequences revealed that pHDM99 contained the coding sequence for the entire transferrin protein including the signal peptide and mature protein, a 173-bp 3'-untranslated sequence ending with a polyH and a 78-bp 5'-untranslated sequence. A vector contig. trf and the phage lambda. promoter PL described the expression of dramatically different products in the lon and htpR strain, L201; suggesting that proteolysis exerts a major influence on transferrin accumulation.

CT Transferrins Escherichia coli Deoxyribonucleic acid sequences
Molecular cloning Protein sequences Plasmid and Episome Gene, animal

L2 ANSWER 8 OF 11 CA COPYRIGHT2001 ACS
AN 116:35632 CA

TI Cloning and sequencing of a cDNA for human transferrin
IN Bowman, Barbara H.; Yang, Funmei
PA University of Texas System, USA
SO U.S., 9 pp. CODEN: USXXAM DT Patent LA English FAN.CNT 1
PATENT NO. KIND DATE APPLICATION NO. DATE

PI US 5026651 A 19910625 US 1985-727335 19850425
AB A cDNA encoding human transferrin is cloned and sequenced for use in recombinant manuf. of the protein. The cDNA was cloned from a cDNA bank using amino acid sequence-derived oligonucleotide probes for screening.

L2 ANSWER 9 OF 11 CA COPYRIGHT2001 ACS
AN 101:66961 CA

TI Human transferrin: cDNA characterization and chromosomal localization
AU Yang, Funmei; Lum, J. B.; McGill, John R.; Moore, Charleen M.; Naylor, Susan L.; Van Bragt, Peter H.; Baldwin, W. David; Bowman, Barbara H.

CS Health Sci. Cent., Univ. Texas, San Antonio, TX, 78284, USA
SO Proc. Natl. Acad. Sci. U. S. A. (1984), 81(9), 2752-6 CODEN: PNASAG; ISSN: 0027-8424 DT Journal L.A. English
AB Transferrin (TF) is the major iron-binding protein in vertebrate serum. It shares homologous amino acid sequences with 4 other proteins: lactotransferrin, ovotransferrin, melanoma antigen p97, and HuBlym-1.

Antigen p97 and the Tf receptor genes have been mapped on human chromosome 3. The goal of the study described here was to initiate the characterization of the Tf gene by identifying and characterizing its cDNA and mapping its chromosomal location. Recombinant plasmids contg. human cDNA encoding Tf were isolated by screening an adult human liver library with a mixed oligonucleotide probe. Within the 2.3 kilobase pairs of Tf cDNA analyzed, there is a probable leader sequence encoded by 57 nucleotides that is followed by 2037 nucleotides that encode the homologous amino and carboxyl domains. During evolution, 3 areas of the homologous amino and carboxyl domains have been strongly conserved; this possible reflects functional constraints assoc. with Fe binding. Chromosomal mapping by in situ hybridization and somatic cell hybrid anal. indicate that the Tf gene is located at q21-25 on human chromosome 3, consistent with linkage of the Tf, Tf receptor, and melanoma p97 loci.

L7 ANSWER 1 OF 8 CA COPYRIGHT2001 ACS

TI Effects of natural selection on patterns of DNA sequence variation at the transferrin, somatolactin, and p53 genes within and among chinook salmon (Oncorhynchus tshawytscha) populations PY 2000

L7 ANSWER 2 OF 8 CA COPYRIGHT2001 ACS

TI Novel methods for therapeutic vaccination PY 2000 2000 2000
L7 ANSWER 3 OF 8 CA COPYRIGHT2001 ACS
TI Neisseria meningitidis expressing transferrin binding proteins of Actinobacillus pleuropneumoniae can utilize porcine transferrin for growth PY 2000

L7 ANSWER 4 OF 8 CA COPYRIGHT2001 ACS

TI Recombinant transferrins, transferrin half-molecules, and *mutants** thereof with improved iron-binding properties PY 1999

L7 ANSWER 5 OF 8 CA COPYRIGHT2001 ACS

TI Diagnosis of genetic disease arising from frameshift *mutation* by RT-PCR and hybridization or antibody assay, and treatment with hammerhead ribozyme cleavage defective mRNA PY 1998 1999 2000

L7 ANSWER 6 OF 8 CA COPYRIGHT2001 ACS

TI Recombinant transferrins, transferrin half-molecules, and *mutants** thereof PY 1992 1992 1995 1996

L7 ANSWER 7 OF 8 CA COPYRIGHT2001 ACS

TI Novel recombinant human lymphotoxin with enhanced cytotoxicity PY 1989 1990 1990 1999 1992

L7 ANSWER 8 OF 8 CA COPYRIGHT2001 ACS

TI The structure of the expressible VH gene from a hybridoma producing monoclonal antibodies against porcine transferrin PY 1989

L7 ANSWER 4 OF 8 CA COPYRIGHT2001 ACS
AN 131:347495 CA

TI Recombinant transferrins, transferrin half-molecules, and *mutants** thereof with improved iron-binding properties

IN Funk, Walter D.; MacGillivray, Ross T. A.; Mason, Anne B.; Woodworth, Robert C.

PA The University of Vermont and State Agricultural College, USA; The University of British Columbia

SO U.S., 26 pp., Cont.-in-part of U.S. Ser. No. 832,029, abandoned.

CODEN: USXXAM DT Patent LA English FAN CNT 2

PATENT NO. KIND DATE APPLICATION NO. DATE

PI US 5986067 A 19991116 US 1993-175158 19931228

PRAI US 1991-652869 19910208 US 1992-832029 19920206

RE CNT 24 RE

(1) Adrian, G; Gene 1986, V49, P167 CA

(2) Aldred, A; Biochem Biophys Res Commun 1984, V122(3), P960 CA

(3) Anon; EP 0307247 1989 CA

(4) Anon; EP 0309787 1989 CA

(6) Baumstark, J; J Biochem Biophys Methods 1987, V14(2), P59 CA

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L10 ANSWER 101 OF 240 CA COPYRIGHT2001 ACS

TI Utilization of *transferrin** -bound iron by Haemophilus influenzae requires an intact tonB gene PY 1995

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TI Siderophore-mediated utilization of iron bound to *transferrin* by *Vibrio parahaemolyticus* PY 1994

L10 ANSWER 103 OF 240 CA COPYRIGHT2001 ACS

TI Iron release from *transferrin** by PY overdin and elastase from *Pseudomonas aeruginosa* PY 1994

TI Polymorphism in the coding sequence of the horse *transferrin* gene PY 1994

L10 ANSWER 105 OF 240 CA COPYRIGHT2001 ACS

TI Characterization and Structural Analysis of a Functional Human Serum *Transferrin* Variant and Implications for Receptor Recognition PY 1994

L10 ANSWER 106 OF 240 CA COPYRIGHT2001 ACS

TI Gonococcal *transferrin** -binding protein 2 facilitates but is not essential for *transferrin* utilization PY 1994

L10 ANSWER 107 OF 240 CA COPYRIGHT2001 ACS

TI Effect of *transferrin*, lactoferrin and chelated iron on human T-lymphocytes PY 1992

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TI Elimination of the O-linked glycosylation site at Thr 104 results in the generation of a soluble human- *transferrin* receptor PY 1994

L10 ANSWER 109 OF 240 CA COPYRIGHT2001 ACS

TI Preparation of *transferrin*-independent, B lymphocytes-derived cell lines PY 1994

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TI Analysis of the signals for polarized transport of influenza virus (A/WSN/33) neuraminidase and human *transferrin* receptor, type II transmembrane proteins PY 1994

L10 ANSWER 111 OF 240 CA COPYRIGHT2001 ACS

TI *Transferrin* in the central nervous system of the shiverer mouse myelin *mutant** PY 1993

L10 ANSWER 112 OF 240 CA COPYRIGHT2001 ACS

TI A C/EBP-binding site in the *transferrin* promoter is essential for expression in the liver but not the brain of transgenic mice PY 1993

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TI YTRF is the conserved internalization signal of the *transferrin** receptor, and a second YTRF signal at position 31-34 enhances endocytosis PY 1993

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TI The End2 *mutation* in CHO cells slows the exit of *transferrin* receptors from the recycling compartment but bulk membrane recycling is unaffected PY 1993

L10 ANSWER 115 OF 240 CA COPYRIGHT2001 ACS

TI Preparation and analysis of isogenic *mutants* in the *transferrin* receptor protein genes, tbpA and tbpB, from *Neisseria meningitidis* PY 1993

L10 ANSWER 116 OF 240 CA COPYRIGHT2001 ACS

TI The region of human *transferrin* involved in binding to bacterial *transferrin* receptors is localized in the C-lobe PY 1993

L10 ANSWER 117 OF 240 CA COPYRIGHT2001 ACS

TI Asp ligand provides the trigger for closure of *transferrin** molecules. Direct evidence from x-ray scattering studies of site-specific *mutants* of the N-terminal half-molecule of human *transferrin** PY 1993

L10 ANSWER 118 OF 240 CA COPYRIGHT2001 ACS

TI Calorimetric studies of the N-terminal half-molecule of *transferrin* and *mutant* forms modified near the iron(3+)-binding site PY 1993

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TI A region of the C-terminal portion of the human *transferrin* receptor contains an asparagine-linked glycosylation site critical for receptor structure and function PY 1993

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TI Expression and loss of the *transferrin* receptor in growing and differentiating HD3 cells PY 1993

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TI Liver-enriched HNF-3.alpha. and ubiquitous factors interact with the human *transferrin* gene enhancer PY 1993

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TI Gonococcal *transferrin*-binding protein 1 is required for *transferrin* utilization and is homologous to TonB-dependent outer membrane receptors PY 1992

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TI The internalization signal and the phosphorylation site of *transferrin* receptor are distinct from the main basolateral sorting information PY 1993

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TI Expression of glycosylated and nonglycosylated human *transferrin** in mammalian cells. Characterization of the recombinant proteins with comparison to three commercially available *transferrins** PY 1993

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TI Role of oligosaccharides in the processing and function of human *transferrin* receptors. Effect of the loss of the three N-glycosyl oligosaccharides individually or together PY 1993

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TI Production of N-terminal and C-terminal human serum *transferrin** in *Escherichia coli* PY 1993

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TI Effect of certain *substituted* biurets on the binding of DNA to N-acylurea *transferrin** PY 1992

L10 ANSWER 128 OF 240 CA COPYRIGHT2001 ACS

TI Characterization of early and late endocytic compartments of the *transferrin* cycle. *Transferrin* receptor antibody blocks erythroid differentiation by trapping the receptor in the early endosome PY 1992

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TI *Transferrin** -receptor-independent but iron-dependent proliferation of variant Chinese hamster ovary cells PY 1992

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TI Structural requirements for high efficiency endocytosis of the human *transferrin* receptor PY 1992

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TI New perspectives on the structure and function of *transferrins** PY 1992

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TI Monoclonal antibodies against defined epitopes of the human *transferrin* receptor cytoplasmic tail PY 1992

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TI Demonstration of an interaction between *transferrin* and lipopolysaccharide. An in vitro study PY 1991

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TI In vitro efficacy of *transferrin** -toxin conjugates against glioblastoma multiforme PY 1992

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TI Structure of the N-linked oligosaccharides of the human *transferrin* receptor PY 1992

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TI *Transferrin* receptor expression in myelin deficient (md) rats PY 1992

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TI Effect of *transferrin*, lactoferrin and chelated iron on human T-lymphocytes PY 1992

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TI Loss of one asparagine-linked oligosaccharide from human *transferrin* receptors results in specific cleavage and association with the endoplasmic reticulum PY 1992

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TI Ligand-regulated internalization and recycling of human beta.2-adrenergic receptors between the plasma membrane and endosomes containing *transferrin* receptors PY 1992

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TI Structural-functional studies of human *transferrin* by using in vitro mutagenesis PY 1991

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TI Efficient production and isolation of recombinant amino-terminal half-molecule of human serum *transferrin* from baby hamster kidney cells PY 1991

L10 ANSWER 142 OF 240 CA COPYRIGHT2001 ACS

TI Characterization of the active part of the human *transferrin** gene enhancer and purification of two liver nuclear factors interacting with the TGTTCG motif present in this region PY 1991

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TI Expression and initial characterization of five site-directed *mutants* of the N-terminal half-molecule of human *transferrin** PY 1991

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TI Purification and partial sequencing of saxiphilin, a saxitoxin-binding protein from the bullfrog, reveals homology to *transferrin** PY 1991

L10 ANSWER 145 OF 240 CA COPYRIGHT2001 ACS

TI *Mutational* analysis of the cytoplasmic tail of the human *transferrin* receptor. Identification of a sub-domain that is required for rapid endocytosis PY 1991

L10 ANSWER 146 OF 240 CA COPYRIGHT2001 ACS

- TI A *mutated* *transferrin* receptor lacking asparagine-linked glycosylation sites shows reduced functionality and an association with binding immunoglobulin protein PY 1991
- L10 ANSWER 147 OF 240 CA COPYRIGHT2001 ACS
TI Proton NMR studies on lanthanides *substituted* *transferrins** PY 1991
- L10 ANSWER 148 OF 240 CA COPYRIGHT2001 ACS
TI Isolation and characterization of a *mutant* of *Neisseria gonorrhoeae* that is defective in the uptake of iron from *transferrin* and hemoglobin and is avirulent in mouse subcutaneous chambers PY 1991
- L10 ANSWER 149 OF 240 CA COPYRIGHT2001 ACS
TI Expression of *transferrin* mRNA in the CNS of normal and jimpy mice PY 1991
- L10 ANSWER 150 OF 240 CA COPYRIGHT2001 ACS
TI Uptake and intracellular distribution of iron from *transferrin** and chelators in erythroid cells PY 1990
- L10 ANSWER 151 OF 240 CA COPYRIGHT2001 ACS
TI Mechanism of transcriptional and translational regulation of *transferrin* and *transferrin* receptor gene PY 1990
- L10 ANSWER 152 OF 240 CA COPYRIGHT2001 ACS
TI Development of a protein-free medium with ferric citrate *substituting* *transferrin* for the cultivation of mouse-mouse hybridomas PY 1991
- L10 ANSWER 153 OF 240 CA COPYRIGHT2001 ACS
TI Isolation and characterization of *Haemophilus influenzae* type b *mutants* defective in *transferrin** binding and iron assimilation PY 1991
- L10 ANSWER 154 OF 240 CA COPYRIGHT2001 ACS
TI Mutagenesis of the human *transferrin* receptor: two cytoplasmic phenylalanines are required for efficient internalization and a second-site *mutation* is capable of reverting an internalization-defective phenotype PY 1991
- L10 ANSWER 155 OF 240 CA COPYRIGHT2001 ACS
TI Potent cytotoxicity of an antihuman *transferrin* receptor-ricin A-chain immunotoxin on human glioma cells in vitro PY 1990
- L10 ANSWER 156 OF 240 CA COPYRIGHT2001 ACS
TI Inhibition of the receptor-mediated endocytosis of diferric *transferrin* is associated with the covalent modification of the *transferrin* receptor with palmitic acid PY 1990
- L10 ANSWER 157 OF 240 CA COPYRIGHT2001 ACS
TI Genetic evidence that *Neisseria gonorrhoeae* produces specific receptors for *transferrin* and lactoferrin PY 1990
- L10 ANSWER 158 OF 240 CA COPYRIGHT2001 ACS
TI Site-specific rate constants for iron removal from diferric *transferrin* by nitrilotris(methylenephosphonic acid) and pyrophosphate PY 1990
- L10 ANSWER 159 OF 240 CA COPYRIGHT2001 ACS
TI Nonacylated human *transferrin* receptors are rapidly internalized and mediate iron uptake PY 1990
- L10 ANSWER 160 OF 240 CA COPYRIGHT2001 ACS
TI Human *transferrin* receptor internalization is partially dependent upon an aromatic amino acid on the cytoplasmic domain PY 1990
- L10 ANSWER 161 OF 240 CA COPYRIGHT2001 ACS
TI Structural requirements of iron-responsive elements for binding of the protein involved in both *transferrin* receptor and ferritin mRNA post-transcriptional regulation PY 1990
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TI A point *mutation* in the cytoplasmic domain of the *transferrin* receptor inhibits endocytosis PY 1990
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TI A comparison of the structure and properties of normal human *transferrin* and a genetic variant of human *transferrin** PY 1990
- L10 ANSWER 164 OF 240 CA COPYRIGHT2001 ACS
TI Characterization of a *transferrin** independent uptake system for iron in HeLa cells PY 1990
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TI Role of the human *transferrin* receptor cytoplasmic domain in endocytosis: localization of a specific signal sequence for internalization PY 1990
- L10 ANSWER 166 OF 240 CA COPYRIGHT2001 ACS
TI Use of two human proteins, albumin and *transferrin**, for making a serum *substitute* adapted for monoclonal antibody production PY 1989
- L10 ANSWER 167 OF 240 CA COPYRIGHT2001 ACS
TI The development of the *transferrin* *transferrin* receptor system in relation to astrocytes, MBP and galactocerebroside in normal and myelin-deficient rat optic nerves PY 1989
- L10 ANSWER 168 OF 240 CA COPYRIGHT2001 ACS
TI Expression from the *transferrin* gene promoter in transgenic mice PY 1989
- L10 ANSWER 169 OF 240 CA COPYRIGHT2001 ACS
TI Schistosoma mansoni: effect of *transferrin* and growth factors on development of schistosomula in vitro PY 1989
- L10 ANSWER 170 OF 240 CA COPYRIGHT2001 ACS
TI Hemolyzates reduce iron released from *transferrin** PY 1989
- L10 ANSWER 171 OF 240 CA COPYRIGHT2001 ACS
TI A splicing defect in the mouse *transferrin* gene leads to congenital atransferrinemia PY 1989
- L10 ANSWER 172 OF 240 CA COPYRIGHT2001 ACS
TI Intermolecular disulfide bonds are not required for the expression of the dimeric state and functional activity of the *transferrin** receptor PY 1989
- L10 ANSWER 173 OF 240 CA COPYRIGHT2001 ACS
TI A growth-promoting factor for human myeloid leukemia cells from horse serum identified as horse serum *transferrin* PY 1989
- L10 ANSWER 174 OF 240 CA COPYRIGHT2001 ACS
TI Damage of the outer membrane of enteric Gram-negative bacteria by lactoferrin and *transferrin** PY 1988
- L10 ANSWER 175 OF 240 CA COPYRIGHT2001 ACS
TI Nucleotide sequence of porcine liver *transferrin** PY 1988
- L10 ANSWER 176 OF 240 CA COPYRIGHT2001 ACS
TI A role for the cytoplasmic domain in *transferrin* receptor sorting and coated pit formation during endocytosis PY 1988
- L10 ANSWER 177 OF 240 CA COPYRIGHT2001 ACS
TI Characterization of the amino acid change in a *transferrin** variant PY 1988
- L10 ANSWER 178 OF 240 CA COPYRIGHT2001 ACS
TI A stem-loop in the 3' untranslated region mediates iron-dependent regulation of *transferrin* receptor mRNA stability in the cytoplasm PY 1988
- L10 ANSWER 179 OF 240 CA COPYRIGHT2001 ACS
TI Phorbol ester treatment increases the exocytic rate of the *transferrin* receptor recycling pathway independent of serine-24 phosphorylation PY 1988
- L10 ANSWER 180 OF 240 CA COPYRIGHT2001 ACS
TI Deletional analysis of the promoter region of the human *transferrin* receptor gene PY 1988
- L10 ANSWER 181 OF 240 CA COPYRIGHT2001 ACS
TI Endocytosis of the *transferrin* receptor requires the cytoplasmic domain but not its phosphorylation site PY 1987
- L10 ANSWER 182 OF 240 CA COPYRIGHT2001 ACS
TI Isolation by streptonigrin enrichment and characterization of a *transferrin** specific iron uptake *mutant* of *Neisseria meningitidis* PY 1987
- L10 ANSWER 183 OF 240 CA COPYRIGHT2001 ACS
TI Structure and methylation state of the human *transferrin* receptor gene: preliminary analysis on tumor cell lines, primary tumors and some normal tissues PY 1987
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TI Regional variation in the levels of *transferrin* in the CNS of normal and myelin-deficient rats PY 1987
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TI Regulation of *transferrin* receptor cycling by protein kinase C is independent of receptor phosphorylation at serine 24 in Swiss 3T3 fibroblasts PY 1987
- L10 ANSWER 186 OF 240 CA COPYRIGHT2001 ACS
TI Phosphorylation of the human *transferrin* receptor by protein kinase C is not required for endocytosis and recycling in mouse 3T3 cells PY 1987
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TI Replacement of *transferrin* in serum-free cultures of mitogen-stimulated mouse lymphocytes by a lipophilic iron chelator PY 1987
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TI Identification of the intermolecular disulfide bonds of the human *transferrin* receptor and its lipid-attachment site PY 1987
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TI Comparison of the intracellular pathways of *transferrin** recycling and vesicular stomatitis virus membrane glycoprotein exocytosis by ultrastructural double-label cytochemistry PY 1987
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TI *Transferrin** mediated transcellular transport of iron-59 across confluent epithelial sheets of Sertoli cells grown in bicameral cell culture chambers PY 1986
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TI Selection and characterization of *transferrin* receptor *mutants* using receptor-specific antibodies PY 1986
- L10 ANSWER 192 OF 240 CA COPYRIGHT2001 ACS
TI Determination of ultrafiltrable zinc, *transferrin* bound and albumin bound zinc using ultrafiltration and flameless A.A.S PY 1985
- L10 ANSWER 193 OF 240 CA COPYRIGHT2001 ACS
TI The transmembrane segment of the human *transferrin* receptor functions as a signal peptide PY 1986
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TI Molecular genetics of *transferrin** : chromosomal localization and individual variation of the gene PY 1985
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TI Evidence that *transferrin* may function exclusively as an iron donor in promoting lymphocyte proliferation PY 1986
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TI Electron spin resonance and magnetic relaxation studies of gadolinium(III) complexes with human *transferrin** PY 1986
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TI A *transferrin* receptor antibody represents one signal for the induction of IL 2 production by a human T cell line PY 1986

- L10 ANSWER 198 OF 240 CA COPYRIGHT2001 ACS
TI Magnetic relaxation of solvent protons by copper(2+)- and dioxovanadium(2+)-* substituted* *transferrin** : theoretical analysis and biochemical implications PY 1985
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TI Inhibition of cell growth by monoclonal anti- *transferrin** receptor antibodies PY 1985
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TI Effects of siderophores on the growth of *Pseudomonas aeruginosa* in human serum and *transferrin** PY 1985
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TI *Transferrin* variants in Tuscany (Italy) Evidence for two "new" Tf alleles PY 1985
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TI Comparison of bovine serum *transferrin* A and D2. II. Glycopeptides PY 1984
- L10 ANSWER 203 OF 240 CA COPYRIGHT2001 ACS
TI Comparison of bovine serum *transferrin* A and D2. I. Amino acid residue differences PY 1984
- L10 ANSWER 204 OF 240 CA COPYRIGHT2001 ACS
TI Studies on equine *transferrin* - I. The isolation and partial characterization of the D and R variants PY 1985
- L10 ANSWER 205 OF 240 CA COPYRIGHT2001 ACS
TI Selection of cell lines resistant to anti- *transferrin* receptor antibody: evidence for a *mutation* in *transferrin** receptor PY 1984
- L10 ANSWER 206 OF 240 CA COPYRIGHT2001 ACS
TI Effect of insulin and *transferrin* in the maintenance of the activated state of the T-lymphocyte induced by allo-antigen PY 1984
- L10 ANSWER 207 OF 240 CA COPYRIGHT2001 ACS
TI The relationships of cartilaginous fishes: an immunological study of serum *transferrins* of holoccephalans and elasmobranchs PY 1984
- L10 ANSWER 208 OF 240 CA COPYRIGHT2001 ACS
TI Failure to release iron from *transferrin* in a Chinese hamster ovary cell *mutant* pleiotropically defective in endocytosis PY 1984
- L10 ANSWER 209 OF 240 CA COPYRIGHT2001 ACS
TI Multiplication-stimulating activity (MSA) can *substitute* for insulin to stimulate the secretion of testicular *transferrin* by cultured Sertoli cells PY 1983
- L10 ANSWER 210 OF 240 CA COPYRIGHT2001 ACS
TI *Transferrin* receptor induction in mitogen-stimulated human T lymphocytes is required for DNA synthesis and cell division and is regulated by interleukin 2 PY 1983
- L10 ANSWER 211 OF 240 CA COPYRIGHT2001 ACS
TI Thallium-205 as an NMR probe for the investigation of *transferrin** PY 1983
- L10 ANSWER 212 OF 240 CA COPYRIGHT2001 ACS
TI Effects of carbohydrate-containing and carbohydrate-restricted hypocaloric and eucaloric diets on serum concentrations of retinol-binding protein, thyroxine-binding prealbumin and *transferrin** PY 1983
- L10 ANSWER 213 OF 240 CA COPYRIGHT2001 ACS
TI The kinetics of interaction of copper(II) species with apo *transferrin* PY 1982
- L10 ANSWER 214 OF 240 CA COPYRIGHT2001 ACS
TI The origin of the visible absorption in metal *transferrins** PY 1981
- L10 ANSWER 215 OF 240 CA COPYRIGHT2001 ACS
TI Polymorphism of *transferrin* locus in horses: immunochemical evidence of two structurally different subgroups of the allelic proteins PY 1981
- L10 ANSWER 216 OF 240 CA COPYRIGHT2001 ACS
TI Can indium-113m be used to measure the transcapillary escape rate of *transferrin** ? PY 1981
- L10 ANSWER 217 OF 240 CA COPYRIGHT2001 ACS
TI Receptor-mediated endocytosis of *transferrin* in developmentally totipotent mouse teratocarcinoma stem cells PY 1981
- L10 ANSWER 218 OF 240 CA COPYRIGHT2001 ACS
TI Characterization of *transferrin* metal-binding sites by diffusion-enhanced energy transfer PY 1980
- L10 ANSWER 219 OF 240 CA COPYRIGHT2001 ACS
TI *Transferrin** -dependent growth inhibition of yeast-phase *Histoplasma capsulatum* by human serum and lymph PY 1980
- L10 ANSWER 220 OF 240 CA COPYRIGHT2001 ACS
TI Binding of iron from nitrilotriacetate analogs by human *transferrin* PY 1980
- L10 ANSWER 221 OF 240 CA COPYRIGHT2001 ACS
TI *Transferrin* can replace serum for in vitro growth of mitogen-stimulated T lymphocytes PY 1979
- L10 ANSWER 222 OF 240 CA COPYRIGHT2001 ACS
TI Kinetics of the specific binding of iron(III) nitrilotriacetate to human apo- *transferrin* and of the ligand exchange of the resulting complex using the stopped-flow technique PY 1980
- L10 ANSWER 223 OF 240 CA COPYRIGHT2001 ACS
TI The reduction and release of iron from Fe3+* *transferrin** CO32- PY 1979
- L10 ANSWER 224 OF 240 CA COPYRIGHT2001 ACS
TI Control of cloning of normal human T lymphocytes by *transferrin** , albumin and different lectins PY 1978
- L10 ANSWER 225 OF 240 CA COPYRIGHT2001 ACS
TI Iron removal from *transferrin** . An experimental study PY 1977
- L10 ANSWER 226 OF 240 CA COPYRIGHT2001 ACS
TI The role of the anion binding site in the binding of iron by serum *transferrin* PY 1974
- L10 ANSWER 227 OF 240 CA COPYRIGHT2001 ACS
TI Effect of adenine nucleotides and Pyrophosphate on the exchange of *transferrin** -bound carbonate PY 1975
- L10 ANSWER 228 OF 240 CA COPYRIGHT2001 ACS
TI Amino acid sequences of three cysteine-free cyanogen-bromide fragments of human serum *transferrin** PY 1975
- L10 ANSWER 229 OF 240 CA COPYRIGHT2001 ACS
TI Resonance Raman scattering from iron(III)- and copper(II)- *transferrin* and an iron(III) model compound. Spectroscopic interpretation of the *transferrin* binding site PY 1974
- L10 ANSWER 230 OF 240 CA COPYRIGHT2001 ACS
TI Anion binding site of *transferrin** PY 1973
- L10 ANSWER 231 OF 240 CA COPYRIGHT2001 ACS
TI Significance of *transferrin** -bound bicarbonate in the uptake of iron by reticulocytes PY 1973
- L10 ANSWER 232 OF 240 CA COPYRIGHT2001 ACS
TI Role of the anion-binding site of *transferrin* in its interaction with the reticulocyte PY 1973
- L10 ANSWER 233 OF 240 CA COPYRIGHT2001 ACS
TI Zero-field splittings of iron complexes of *transferrins** PY 1972
- L10 ANSWER 234 OF 240 CA COPYRIGHT2001 ACS
- TI Blood groups of pigs. IV. Genetic determination of the serum *transferrin** , prealbumin, hemopectin, ceruloplasmin, and amylase variants PY 1970
- L10 ANSWER 235 OF 240 CA COPYRIGHT2001 ACS
TI Physicochemical properties of *transferrins* in brook trout PY 1970
- L10 ANSWER 236 OF 240 CA COPYRIGHT2001 ACS
TI Nuclear magnetic relaxation dispersion in protein solutions. II. *Transferrin* PY 1969
- L10 ANSWER 237 OF 240 CA COPYRIGHT2001 ACS
TI Human *transferrins* C and DChi: an amino acid difference PY 1967
- L10 ANSWER 238 OF 240 CA COPYRIGHT2001 ACS
TI *Transferrin* D(sub chi): amino acid *substitution** PY 1968
- L10 ANSWER 239 OF 240 CA COPYRIGHT2001 ACS
TI Structural studies of fragments resulting from cyanogen bromide degradation of human *transferrin** PY 1967
- L10 ANSWER 240 OF 240 CA COPYRIGHT2001 ACS
TI *Transferrin* DI: identity in Australian aborigines and American Negroes PY 1967
- L10 ANSWER 117 OF 240 CA COPYRIGHT2001 ACS
AN 119:111701 CA
TI Asp ligand provides the trigger for closure of *transferrin** molecules. Direct evidence from x-ray scattering studies of site-specific *mutants* of the N-terminal half-molecule of human *transferrin**
AU Grossmann, J. Guenter; Mason, Anne B.; Woodworth, Robert C.; Neu, Margarette; Lindley, Peter F.; Hasnain, S. Samar
CS Mol. Biophys. Group, Daresbury Lab., Warrington, WA4 4AD, UK
SO J. Mol. Biol. (1993), 231(3), 554-8 CODEN: JMOBAK; ISSN: 0022-2836DT Journal/LA English
AB Recent x-ray crystallog. and soln. x-ray scattering studies have shown that transferrins (serum transferrin, lactoferrin and ovotransferrin) undergo a major conformational change when iron is incorporated into the mol. Apoproteins show a structure with open interdomain clefts which close when iron is bound. The closed conformation has been suggested as an important step in the receptor recognition. Here, x-ray soln. scattering expts. of the *mutated* N-terminal fragment of human serum transferrin with Asp63->Ser (Cys) are reported. The data provide the first direct expl. evidence for the existence of a trigger mechanism for the closure of the interdomain cleft and that this trigger mechanism is disrupted by *mutation* of Asp63, the only ligand of iron from domain I.
- L10 ANSWER 118 OF 240 CA COPYRIGHT2001 ACS
AN 119:111687 CA
TI Calorimetric studies of the N-terminal half-molecule of *transferrin* and *mutant* forms modified near the iron(3+)-binding site
AU Lin, Lung Nan; Mason, Anne B.; Woodworth, Robert C.; Brandts, John F.
CS Dep. Chem., Univ. Massachusetts, Amherst, MA, 01003, USA
SO Biochem. J. (1993), 293(2), 517-22 CODEN: BJAOAK; ISSN: 0306-3275 DT Journal/LA English
AB The effects of single amino acid *substitutions* on the thermal stability of the N-terminal half-mol. of human transferrin and its iron-binding affinity were studied by high-sensitivity scanning calorimetry. The site-directed *mutations* studied (D63->S; D63->C; G65->R; H207->E and K206->Q) are located on the surface of the binding cleft. Differential scanning calorimetry showed that the *mutations* do not significantly alter the conformational stability of the apo-forms of the proteins. The changes in free energy of unfolding relative to the wild-type protein range from 0.83 to -2.4 kJ/mol. The D63->S, G65->R and H207->E *mutations* slightly

destabilize the apo-protein, while the D63->C and K206->Q *mutations* increase its stability by a small amt. However, there are large compensating enthalpy-entropy changes caused by all *mutations*. All *mutants* bind ferric ion, but with different affinities. Replacement of Asp-63 by either Ser or Cys decreases the apparent binding const. by 5-6 orders of magnitude. The G65->R *mutation* also decreases the apparent binding const. by 5 orders of magnitude. The K206->Q *mutation* increases the apparent binding const. by 20-fold, while the H207->E *mutation* does not significantly change the apparent iron-binding affinity of the half-mol.

L10 ANSWER 119 OF 240 CA COPYRIGHT2001 ACS
AN 119:111605 CA

TI A region of the C-terminal portion of the human *transferrin* receptor contains an asparagine-linked glycosylation site critical for receptor structure and function

AU Williams, Anthony M.; Ems, Caroline A.
CS Dep. Cell Biol. Anat., Oregon Health Sci. Univ., Portland, OR, 97201-3098, USA
SO J. Biol. Chem. (1993), 268(17), 12780-6 CODEN: JBCHA3; ISSN: 0021-9258 DT Journal LA English

AB The transferrin receptor is a cell surface protein and is responsible for the uptake of iron into many eukaryotic cells. In its mature form, the receptor possesses three asparagine-linked oligosaccharides. The effect of asparagine-linked glycosylation on the processing and cell surface localization of the human transferrin receptor is examd. here by site-directed mutagenesis. Each of the extracellular consensus sequences (Asn-X-Ser/Thr) for asparagine-linked glycosylation was *mutated* individually and in all possible combinations. The constructs were transfected stably into NIH-3T3 cells and a Chinese hamster ovary cell line lacking endogenous transferrin receptors. Of the seven possible combinations of glycosylation sites, single *mutations* eliminating glycosylation at either Asn251 or Asn317 do not affect the processing and surface localization of the receptor. Eliminating both of these sites together has a small effect on the behavior of the receptor. However, *mutation* of the C-terminal glycosylation site (Asn727) has the most profound neg. effect on the appearance of the receptor at the cell surface. The *mutants* lacking glycosylation at Asn727 appear to be retained in the endoplasmic reticulum as an increased assocn. with binding Ig protein (BiP) is obsd. Addn. of a new glycosylation site in the C-terminal region of the unglycosylated *mutated* transferrin receptor restores the cell surface localization and the transferrin binding of the transferrin receptor, indicating that glycosylation in this region is crit. for the correct transport of this receptor to the cell surface.

L10 ANSWER 140 OF 240 CA COPYRIGHT2001 ACS
AN 116:53737 CA

TI Structural-functional studies of human *transferrin* by using in vitro mutagenesis

AU Chow, Billy K. C.; Funk, Walter D.; Banfield, David K.; Lineback, Janet A.; Mason, Anne B.; Woodworth, Robert C.; MacGillivray, Ross T. A.
CS Dep. Biochem., Univ. British Columbia, Vancouver, BC, W6T 1W5, Canada
SO Curr. Stud. Hematol. Blood Transfus. (1991), 58(Biotechnol. Plasma Proteins), 132-8 CODEN: CSHTES

DT Journal; General Review LA English
AB A review, with 12 refs. on expts. leading to the expression of fragments of human transferrin in baby hamster kidney cells. The recombinant protein behaves identically to the protein isolated by proteolytic digestion of transferrin isolated from serum. *Mutant* transferrin mols. should enable one to study structural-functional relationships in this protein.

L10 ANSWER 163 OF 240 CA COPYRIGHT2001 ACS
AN 112:194062 CA

TI A comparison of the structure and properties of normal human *transferrin* and a genetic variant of human *transferrin**

AU Welch, Simon; Langmead, Louise
CS Dep. Biochem., London Hosp. Med. Coll., London, E1 2AD, UK
SO Int. J. Biochem. (1990), 22(3), 275-82 CODEN: IJBOBV; ISSN: 0020-711X DT Journal LA English

AB A rare genetic variant of human serum transferrin (TfBSHAW) is reported. Variant and normal transferrins were purified. The 2 proteins were identical with respect to their mol. wts., heat stability, Fe uptake, and absorbance spectra. The amino acid *substitution* is thought to be isoleucine replaced by asparagine at either positions 378 or position 381. The Fe3+ bound to the C-site of TfBSHAW is unstable in the presence of protons or 6M urea.

L10 ANSWER 177 OF 240 CA COPYRIGHT2001 ACS
AN 109:69108 CA

TI Characterization of the amino acid change in a *transferrin** variant

AU Evans, Robert W.; Meilak, Andrew; Aitken, Alastair; Patel, Kokila J.; Wong, Collin; Garratt, Richard C.; Chitnavis, Bhupal
CS Div. Biochemistry, Guy's Hosp., London, SE1 9RT, UK
SO Biochem. Soc. Trans. (1988), 16(5), 834-5 CODEN: BCSTBS; ISSN: 0300-5127 DT Journal LA English

AB The amino acid *substitution* was characterized in a variant of human serum transferrin which is unable to retain Fe in the C-terminal site on PAGE in 6M urea. A glycine residue at position 394 of the normal protein was replaced by arginine in the *mutant* protein.

L10 ANSWER 195 OF 240 CA COPYRIGHT2001 ACS
AN 104:128064 CA

TI Evidence that *transferrin* may function exclusively as an iron donor in promoting lymphocyte proliferation

AU Brock, J. H.; Mainou-Fowler, Tryfonia; Webster, Laura M.
CS Dep. Bacteriol. Immunol., Univ. Glasgow, Glasgow, G11 6NT, UK
SO Immunology (1986), 57(1), 105-10 CODEN: IMMUAJ; ISSN: 0019-2805 DT Journal LA English

AB In order to distinguish between a requirement for Fe and a possible addnl. requirement for the Fe-binding protein transferrin, the ability of mouse lymphocytes to proliferate in response to concanavalin A was investigated. Cells proliferated well when cultured in medium contg. 5% fetal calf serum, but if Fe-free mouse or human transferrins were added, proliferation was inhibited by >80%, whereas the same transferrins said. to 30% with Fe enhanced proliferation by 40-70%. In serum-free medium, proliferation was greater in the presence of 30% Fe-satd. transferrin than when the protein was satd. only to 10%. Addn. of Mn to the latter, to bring the total metal satn. to 30%, gave no improvement in proliferation. Lymphocytes took up Fe preferentially when transferrin contg. both Fe and Mn was present in the culture medium. The degree of proliferation in serum-free medium in the presence of a variant of human transferrin with abnormal Fe-binding and receptor-binding properties was almost identical to that when normal human transferrin was used. Finally, when a monoclonal antibody to the mouse transferrin receptor and Fe nitritriacetate were *substituted* for Fe-transferrin in serum-free medium, proliferation was decreased by >95%. These results strongly suggest that transferrin promotes lymphocyte proliferation solely as a result of its Fe-donating properties, and that an addnl. role such as the provision of a proliferation-inducing membrane signalling event following interaction with the transferrin receptor seems unlikely.

L10 ANSWER 201 OF 240 CA COPYRIGHT2001 ACS

AN 103:67753 CA

TI *Transferrin* variants in Tuscany (Italy). Evidence for two "new" Tf alleles

AU Giari, A.; Weidinger, S.; Domenici, R.; Bargagna, M.
CS Ist. Med. Leg. Assicur., Univ. Pisa, Pisa, 56100, Italy
SO Hum. Genet. (1985), 69(3), 284-6 CODEN: HUGEDQ; ISSN: 0340-6717 DT Journal LA English

AB Polyacrylamide gel isoelec. focusing (PAGIF) with carrier ampholytes was used for the detn. of transferrin (Tf) phenotypes in a sample of 965 unrelated healthy blood donors from Tuscany (Italy). Thirteen rare variants in a heterozygote state were found (4 Tf D, 7 Tf B, and 2 rare Tf C subtypes). Among them 2 apparently new variants, tentatively called Tf C15 and Tf B4, were identified. The rare Tf B0 *mutant* was also obsd.

L10 ANSWER 237 OF 240 CA COPYRIGHT2001 ACS
AN 72:18486 CA

TI Human *transferrins* C and DChi: an amino acid difference

AU Wang, An-Chuan; Sutton, H. Eldon; Howard, Patricia N.
CS Univ. of Texas, Austin, Tex., USA

SO Biochem. Genet. (1967), 1(1), 55-9 CODEN: BIGEBA DT Journal LA English

AB A single peptide difference has been found in tryptic digests of human tra nsferrins (Tf) C and Dchi. The peptide isolated from Tf C had the sequence Asp-Ser-Ala-His-Gly-Phe-Leu-Lys. The corresponding peptide from Tf Dchi had the compn. (Gly, Phe, Leu, Lys). Apparently, histidine in the Tf C peptide was replaced by lysine or argi nine in Tf Dchi, producing a new point of attack for trypsin. On the basis of the genetic code, arginine is proposed as the replacement.

L10 ANSWER 238 OF 240 CA COPYRIGHT2001 ACS
AN 70:93182 CA

TI *Transferrin* D(sub chi): amino acid *substitution**

AU Howard, Patricia N.; Wang, An-Chuan; Sutton, H. Eldon
CS Univ. of Texas, Austin, Tex., USA

SO Biochem. Genet. (1968), 2(3), 265-9 CODEN: BIGEBA DT Journal LA English

AB A peptide difference was found in the neutral band (pH 6.4) regions of tryptic digests of human transferrins C and D chi.. This peptide was isolated, hydrolyzed, and subjected to amino acid anal. and found to have 4 amino acids: arginine, aspartic acid, serine, and alanine. This peptide is the result of the replacement of histidine by arginine in the transferrin C peptide so that the sequence Asp-Ser-Ala-His-becomes Asp-Ser-Ala-Arg.

L13 ANSWER 1 OF 147 CA COPYRIGHT2001 ACS

TI Serum-free culture medium for mammalian cells PY 1991 1990

L13 ANSWER 2 OF 147 CA COPYRIGHT2001 ACS

TI Uptake and intracellular distribution of iron from transferrin and chelators in erythroid cells PY *1990**

L13 ANSWER 3 OF 147 CA COPYRIGHT2001 ACS

TI Studies on the biochemical polymorphism of blood protein and enzyme in Che Ju native horses. IV. Genetic variability and relationship PY *1990**

L13 ANSWER 4 OF 147 CA COPYRIGHT2001 ACS

TI Selective enrichment for temperature-sensitive secretion *mutants** of mammalian cells using plant lectin, concanavalin A PY *1990**

L13 ANSWER 5 OF 147 CA COPYRIGHT2001 ACS

TI Site-specific rate constants for iron removal from diferric transferrin by nitrilotris(methylenephosphonic acid) and pyrophosphate PY *1990**

L13 ANSWER 6 OF 147 CA COPYRIGHT2001 ACS

- TI Anion binding to uroferon. Evidence for phosphate coordination to the iron(III) ion of the dinuclear active site and interaction with the hydroxo bridge PY *1990**
- L13 ANSWER 7 OF 147 CA COPYRIGHT2001 ACS
TI Hemoglobin nicosomes. II. In vitro interactions with plasma proteins and phagocytes PY *1990**
- L13 ANSWER 8 OF 147 CA COPYRIGHT2001 ACS
TI A comparison of the structure and properties of normal human transferrin and a genetic variant of human transferrin PY 1990
- L13 ANSWER 9 OF 147 CA COPYRIGHT2001 ACS
TI Primary structure of horse serumtransferrin glycans. Demonstration that heterogeneity is related to the number of glycans and to the presence of N-acetylneuraminic acid and N-acetyl-4-O-acetylneuraminic acid PY *1989**
- L13 ANSWER 10 OF 147 CA COPYRIGHT2001 ACS
TI Use of two human proteins, albumin and transferrin, for making a serum *substitute* adapted for monoclonal antibody production PY *1989**
- L13 ANSWER 11 OF 147 CA COPYRIGHT2001 ACS
TI Expression from the transferrin gene promoter in transgenic mice PY *1989**
- L13 ANSWER 12 OF 147 CA COPYRIGHT2001 ACS
TI Evidence for a factor in normal human serum that induces human neutrophilic granulocyte end-stage maturation in vitro PY 1989
- L13 ANSWER 13 OF 147 CA COPYRIGHT2001 ACS
TI Inclusion of antioxidants in resuscitation fluids PY *1988**
- L13 ANSWER 14 OF 147 CA COPYRIGHT2001 ACS
TI Schistosoma mansoni: effect of transferrin and growth factors on development of schistosomula in vitro PY *1989**
- L13 ANSWER 15 OF 147 CA COPYRIGHT2001 ACS
TI Indications of plasmapheresis and selection of different *substitution* solutions PY *1989**
- L13 ANSWER 16 OF 147 CA COPYRIGHT2001 ACS
TI Potential labeling of monoclonal antibodies with positron emitters PY *1988**
- L13 ANSWER 17 OF 147 CA COPYRIGHT2001 ACS
TI Hemolyzates reduce iron released from transferrin PY *1989**
- L13 ANSWER 18 OF 147 CA COPYRIGHT2001 ACS
TI A splicing defect in the mouse transferrin gene leads to congenital atransferrinemia PY *1989**
- L13 ANSWER 19 OF 147 CA COPYRIGHT2001 ACS
TI Glutamine-independent human lymphoblastic cells and their establishment PY 1988 1994
- L13 ANSWER 20 OF 147 CA COPYRIGHT2001 ACS
TI Serum-free mouse embryo cells: growth responses in vitro PY *1989**
- L13 ANSWER 21 OF 147 CA COPYRIGHT2001 ACS
TI Preparation of idarubicin-Ig conjugates for targeting of neoplasms and T-lymphocyte subpopulations PY 1988 1997 1988 1992 1988 1988 1988 1988 1989 1989 1994 1994 1988 1988 1997 1997 1988 1996 1996 1988 1991 1988 1988 1991 1988 1999 1989 1996 1991 1992 1992 1996 1998 1998
- L13 ANSWER 22 OF 147 CA COPYRIGHT2001 ACS
TI Relaxation of the electronic spin moment of copper(II)-macromolecular complexes in solution PY *1989**
- L13 ANSWER 23 OF 147 CA COPYRIGHT2001 ACS
TI Isolation and characterization of hemolysin *mutants* of *Vibrio vulnificus* PY *1988**
- L13 ANSWER 24 OF 147 CA COPYRIGHT2001 ACS
- TI Interleukin 1 induction of a serine esterase in a murine T cell line is inhibited by fetal calf serum PY *1989**
- L13 ANSWER 25 OF 147 CA COPYRIGHT2001 ACS
TI Serum-free culture of insulin-secreting clonal cells from a hamster insulinoma PY *1989**
- L13 ANSWER 26 OF 147 CA COPYRIGHT2001 ACS
TI A pilot study of the use of placental cord blood samples in monitoring for *mutational* events PY *1988**
- L13 ANSWER 27 OF 147 CA COPYRIGHT2001 ACS
TI A growth-promoting factor for human myeloid leukemia cells from horse serum identified as horse serum transferrin PY 1989
- L13 ANSWER 28 OF 147 CA COPYRIGHT2001 ACS
TI Damage of the outer membrane of enteric Gram-negative bacteria by lactoferrin and transferrin PY *1988**
- L13 ANSWER 29 OF 147 CA COPYRIGHT2001 ACS
TI Freeze-protection of proteins for medical and other uses PY 1987 1989
- L13 ANSWER 30 OF 147 CA COPYRIGHT2001 ACS
TI Hemoglobin: a lifesaver and an oxidant. How to tip the balance PY *1988**
- L13 ANSWER 31 OF 147 CA COPYRIGHT2001 ACS
TI Development of a serum-free medium for in vitro immune responses by using beta.-cyclodextrin. Demonstration of the requirements for polyamines PY *1988**
- L13 ANSWER 32 OF 147 CA COPYRIGHT2001 ACS
TI Nucleotide sequence of porcine liver transferrin PY *1988**
- L13 ANSWER 33 OF 147 CA COPYRIGHT2001 ACS
TI Preparation and testing of bioinlabeled psoralens as neoplasm inhibitors and biochemical tools PY 1987 1989 1987 1988
- L13 ANSWER 34 OF 147 CA COPYRIGHT2001 ACS
TI Interactions of growth factors and retroviral oncogenes with mitogenic signal transduction pathways of Balb/MK keratinocytes PY *1988**
- L13 ANSWER 35 OF 147 CA COPYRIGHT2001 ACS
TI Characterization of the amino acid change in a transferrin variant PY *1988**
- L13 ANSWER 36 OF 147 CA COPYRIGHT2001 ACS
TI Biologic effects of transdermal estradiol PY *1988**
- L13 ANSWER 37 OF 147 CA COPYRIGHT2001 ACS
TI Enhancement of cytotoxicity of modecin by nigericin in modecin-resistant *mutant* cell lines PY *1988**
- L13 ANSWER 38 OF 147 CA COPYRIGHT2001 ACS
TI A chloroquine-resistant Swiss 3T3 cell line with a defect in late endocytic acidification PY *1988**
- L13 ANSWER 39 OF 147 CA COPYRIGHT2001 ACS
TI Hereditary hypotransferrinemia with hemosiderosis, a murine disorder resembling human atransferrinemia PY *1987**
- L13 ANSWER 40 OF 147 CA COPYRIGHT2001 ACS
TI Kinetics of endosome acidification in *mutant* and wild-type Chinese hamster ovary cells PY *1987**
- L13 ANSWER 41 OF 147 CA COPYRIGHT2001 ACS
TI Isolation by streptonigrin enrichment and characterization of a transferrin-specific iron uptake *mutant* of *Neisseria meningitidis* PY *1987**
- L13 ANSWER 42 OF 147 CA COPYRIGHT2001 ACS
TI Acidification of morphologically distinct endosomes in *mutant* and wild-type Chinese hamster ovary cells PY *1987**
- L13 ANSWER 43 OF 147 CA COPYRIGHT2001 ACS
TI Protein conjugates of bis-indole alkaloids, their preparation and application PY 1987 1987 1990 1990 1987 1987 1988 1988 1987 1987
- L13 ANSWER 44 OF 147 CA COPYRIGHT2001 ACS
TI Tertiary structure in N-linked oligosaccharides PY *1987**
- L13 ANSWER 45 OF 147 CA COPYRIGHT2001 ACS
TI Differential loss of enzyme activity by vitamin C and iron containing proteins PY *1987**
- L13 ANSWER 46 OF 147 CA COPYRIGHT2001 ACS
TI Virulence of iron transport *mutants* of *Shigella flexneri* and utilization of host iron compounds PY *1987**
- L13 ANSWER 47 OF 147 CA COPYRIGHT2001 ACS
TI Transferrin-mediated transcellular transport of iron-59 across confluent epithelial sheets of Sertoli cells grown in bicameral cell culture chambers PY *1986**
- L13 ANSWER 48 OF 147 CA COPYRIGHT2001 ACS
TI A thermosensitive lesion in a Chinese hamster cell *mutant* causing differential effects on the acidification of endosomes and lysosomes PY *1986**
- L13 ANSWER 49 OF 147 CA COPYRIGHT2001 ACS
TI Determination of ultrafiltrable zinc, transferrin bound and albumin bound zinc using ultrafiltration and flameless A.A.S PY 1985
- L13 ANSWER 50 OF 147 CA COPYRIGHT2001 ACS
TI Absorption of fortification iron from milk formulas in infants PY *1986**
- L13 ANSWER 51 OF 147 CA COPYRIGHT2001 ACS
TI Iron 3-hydroxy pyrone or 3-hydroxy pyridone complexes PY 1985 1986 1990 1991 1986 1985 1987 1988 1985 1991 1991 1985 1989 1985 1995 1993
- L13 ANSWER 52 OF 147 CA COPYRIGHT2001 ACS
TI NMR studies on copper(II) containing biological molecules PY *1986**
- L13 ANSWER 53 OF 147 CA COPYRIGHT2001 ACS
TI Internal proton magnetic resonance probes for pH titration of proteins PY *1986
- L13 ANSWER 54 OF 147 CA COPYRIGHT2001 ACS
TI A defined medium for and the effect of insulin on the growth, amino acid transport, and morphology of Chinese hamster ovary cells, CHO-K1 (CCL 61) and the isolation of insulin "independent" *mutants* PY *1986**
- L13 ANSWER 55 OF 147 CA COPYRIGHT2001 ACS
TI Electron spin resonance and magnetic relaxation studies of gadolinium(III) complexes with human transferrin PY *1986**
- L13 ANSWER 56 OF 147 CA COPYRIGHT2001 ACS
TI Pharmaceutical compositions containing 1-hydroxy PYridin-2-one derivatives PY 1985 1987 1989 1986 1985 1987 1986 1985 1991 1992 1985 1993 1993 1993 1996
- L13 ANSWER 57 OF 147 CA COPYRIGHT2001 ACS
TI Magnetic relaxation of solvent protons by copper(2+)- and dioxovanadium(2+)-*substituted* transferrin: theoretical analysis and biochemical implications PY 1985
- L13 ANSWER 58 OF 147 CA COPYRIGHT2001 ACS
TI Effects of siderophores on the growth of *Pseudomonas aeruginosa* in human serum and transferrin PY *1985**
- L13 ANSWER 59 OF 147 CA COPYRIGHT2001 ACS
TI Transferrin variants in Tuscany (Italy). Evidence for two "new" Tf alleles PY 1985
- L13 ANSWER 60 OF 147 CA COPYRIGHT2001 ACS
TI Establishment of rat fetal liver lines and characterization of their metabolic and hormonal properties: use of temperature-sensitive SV40 virus PY *1985**
- L13 ANSWER 61 OF 147 CA COPYRIGHT2001 ACS

- TI Modulation of interleukin 2 release from a primate lymphoid cell line in serum-free and serum-containing media PY 1985
- L13 ANSWER 62 OF 147 CA COPYRIGHT2001 ACS
- TI Comparison of bovine transferrin A and D2. II. Glycopeptides PY 1984
- L13 ANSWER 63 OF 147 CA COPYRIGHT2001 ACS
- TI Comparison of bovine serum transferrin A and D2. I. Amino acid residue differences PY *1984**
- L13 ANSWER 64 OF 147 CA COPYRIGHT2001 ACS
- TI Crossed immunoelectrophoretic analysis of serum abnormalities following thermal injury PY *1984**
- L13 ANSWER 65 OF 147 CA COPYRIGHT2001 ACS
- TI Studies on equine transferrin - I. The isolation and partial characterization of the D and R variants PY *1985**
- L13 ANSWER 66 OF 147 CA COPYRIGHT2001 ACS
- TI Protein compositions substantially free from infectious agents PY 1984 1985 1988 1985 1984 1986 1985 1988 1984 1993 1987
- L13 ANSWER 67 OF 147 CA COPYRIGHT2001 ACS
- TI On deciding which factors regulate cell growth PY *1984**
- L13 ANSWER 68 OF 147 CA COPYRIGHT2001 ACS
- TI Horizontally defined, serum-free medium for a proximal tubular kidney epithelial cell line, LLC-PK1 PY *1984**
- L13 ANSWER 69 OF 147 CA COPYRIGHT2001 ACS
- TI Influence of genetic, cellular, and hormonal factors on simian virus 40-induced transformation PY *1984**
- L13 ANSWER 70 OF 147 CA COPYRIGHT2001 ACS
- TI The relative effect of ascorbic acid on iron absorption from soy-based and milk-based infant formulas PY *1984**
- L13 ANSWER 71 OF 147 CA COPYRIGHT2001 ACS
- TI Effect of insulin and transferrin in the maintenance of the activated state of the T-lymphocyte induced by allo-antigen PY 1984
- L13 ANSWER 72 OF 147 CA COPYRIGHT2001 ACS
- TI The relationships of cartilaginous fishes: an immunological study of serum transferrins of holocephalans and elasmobranchs PY *1984**
- L13 ANSWER 73 OF 147 CA COPYRIGHT2001 ACS
- TI Hydrophobic interactions in Plasmodium falciparum invasion into human erythrocytes PY *1984**
- L13 ANSWER 74 OF 147 CA COPYRIGHT2001 ACS
- TI Serum-free medium for hybridoma and parental myeloma cell cultivation: a novel composition of growth-supporting substances PY *1984**
- L13 ANSWER 75 OF 147 CA COPYRIGHT2001 ACS
- TI Supplements and their combination for cell culture mediums PY 1984 1988 1984 1992 1995
- L13 ANSWER 76 OF 147 CA COPYRIGHT2001 ACS
- TI Mechanism of action of blood components in transfusion PY *1984**
- L13 ANSWER 77 OF 147 CA COPYRIGHT2001 ACS
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TI Characterization of the amino acid change in a transferrin variant
AU Evans, Robert W.; Meilak, Andrew; Aitken, Alastair; Patel, Kokila J.; Wong, Collin; Garratt, Richard C.; Chitnavis, Bhupal
CS Div. Biochemistry, Guy's Hosp., London, SE1 9RT, UK
SO Biochem. Soc. Trans. (*1988**), 16(5), 834-5 CODEN: BCSTB5; ISSN: 0300-5127DT Journal LA English
AB The amino acid *substitution* was characterized in a variant of human serum transferrin which is unable to retain Fe in the C-terminal site on PAGE in 6M urea. A glycine residue at position 394 of the normal protein was replaced by arginine in the *mutant* protein.

R11 2917 B 11 BETA-GLOBULINS
R12 47726 B 92 CARRIER PROTEINS

S2 769 "TRANSFERRIN -GENETICS -GE"

S3 40472 GLYCOSYL?

S4 14 S2 AND S3

S5 171 S1 AND S3 NOT S4

S6 191346 "MUTATION"

S7 220 S1 AND S6 NOT (S4 OR S5)

S8 54 S7 AND S2

S9 0 8/8/38, 42

S10 13192 DC="G5.632.625."

S11 2 S2 AND S10 NOT S8

S12 14 S1 AND S10 NOT (S11 OR S4 OR S5 OR S8)

S13 165 S7 NOT (S8 OR S11 OR S12)

Ref Items Type RT Index-term

- R1 58304 5 *MUTAGENESIS
R2 13192 X DC=G5.632.625. (MUTAGENESIS)
R3 819 R 8 ANTIMUTAGENIC AGENTS
R4 21371 R 26 MUTAGENS
R5 191346 B 22 MUTATION
R6 5649 N 16 MUTAGENESIS, INSERTIONAL

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[Human amniotic fluid transferrin stimulates
progesterone production by human trophoblast
cells in vitro] Humanes Amniontransferrin

Ref Items Type RT Index-term

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R2 10534 X DC=D12.776.124.50.800. (TRANSFERRIN)
R3 10534 X DC=D12.776.124.790.223.839. (TRANSFERRIN)
R4 10534 X DC=D12.776.157.890. (TRANSFERRIN)
R5 10534 X DC=D12.776.377.715.182.839. (TRANSFERRIN)
R6 10534 X DC=D12.776.556.901. (TRANSFERRIN)
R7 28 X 1 SIDEROPHILIN
R8 67071 R 13 IRON
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R10 1915 B 20 ACUTE-PHASE PROTEINS

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- Padda JS; Schryvers AB
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- Derivatives of human transferrin (hTf) with removed or modified N-linked oligosaccharides were compared with native hTf with respect to their binding to bacterial hTf receptors from Neisseria meningitidis, N. gonorrhoeae, and Haemophilus influenzae. Partially and fully deglycosylated hTf were prepared by enzymatic deglycosylation with glycopeptidase F and isolated by concanavalin A-Sepharose affinity chromatography. Oligosaccharide-modified hTf was prepared via mild periodate oxidation. Competition and direct binding experiments with the hTf derivatives

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Unusual transferrin TF*D mutants in some Congo populations.

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Gene geography (ITALY) Apr 1987, 1 (1) p9-14, ISSN 0394-249X Journal Code: AYL Languages: ENGLISH Document type: JOURNAL ARTICLE

Transferrin allele (TF) distribution was investigated in three Bantu and one Babenga Pygmy groups of Congo, by isoelectric focusing on polyacrylamide (PIEF). In comparison with other Black populations, the four groups had a twofold higher TF*D frequency. Three different TF*D mutants were observed, the commonest type of which was identical by PIEF to a *D1 Caucasian allele. The classification of the other two is

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